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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,679	05/09/2006	James P. Reilly	29920-200170	9788

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EXAMINER	
SHEN, BIN	
ART UNIT	PAPER NUMBER
1657	
MAIL DATE	DELIVERY MODE
11/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,679	REILLY ET AL.	
	Examiner	Art Unit	
	BIN SHEN	1657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/9/2006, 2/27/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *Notice to Comply*.

DETAILED ACTION

The IDS received 5/9/2006, 2/27/2007, the preliminary amendments received 5/9/2006, 8/30/2006 have been entered.

Election

Applicant's election of Group II, claims 21-34, in the reply filed on 9/5/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1-20 are canceled.

Only claims 21-34 are presented for examination on the merits.

Specification

This application contains sequence disclosures at pages 5, 14, 15, 16, 17 of the specification that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. § 1.821(a((1) and (a)(2). However, this application fails to comply with one or more of the requirements of 37 C.F.R. § 1.821 through 1.825 for one or more of the reasons set forth on the attached form "Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequences And/Or Amino Acid Sequence Disclosures". Wherein attention is directed to paragraph(s) §1.82 (c) and (e). Although an examination of this application on the merits can proceed without prior compliance, compliance with the Sequence Rules is required for the response to this Office action to be complete.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-26, 28, 30, and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Butcher (1999).

Butcher teaches a device (page 356, Fig. 1) comprising a source of vacuum ultraviolet radiation (page 356, Fig.1) has a wavelength of about 157 nm (read as 118 nm, see Fig. 1 "118 nm Beam Generator"); wherein the source of vacuum ultraviolet radiation is a laser (page 356, Fig. 1, legend, line 3) ; wherein the device further comprising a mass spectrometer with a source of radiation and a component capable of forming the peptide or protein ion from a sample (page 356, Fig. 1); wherein the mass spectrometer includes a first mass analyzer and a second mass analyzer (tandem mass spectrometry, see page 357, 5th paragraph, line 1); wherein the device further comprising an ion trap that is coupled to a mass analyzing component (page 356, Fig. 1, legend, line 1); wherein the mass/charge ratio is inherently measured by the mass spectrometer.

Claims 21-26, 28-29, 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Mühlberger (2002).

Mühlberger teaches a device (page 3794, Fig. 2) comprising a source of vacuum ultraviolet radiation (VUV beam see page 3794, Fig. 2) has a wavelength of about 157 nm (page 3793, Table 1, column 4 wavelength); wherein the source of vacuum ultraviolet radiation is a laser (page 3793, right column, line 4) ; wherein the device further comprising a mass spectrometer with a source of radiation and a component capable of forming the peptide or protein ion from a sample (page 3794, Fig. 2); wherein the mass spectrometer includes a first mass analyzer that is a time of flight analyzer (page 3794, Fig. 2); wherein the mass/charge ratio is inherently measured by the mass spectrometer.

Claims 21, 23-26, 28-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Baldwin (2001).

Baldwin teaches a device (page 1709, Instrument Design, and page 1710, Fig. 1) comprising a source of vacuum ultraviolet radiation (page 1709, left column, 2nd full paragraph, line 3); wherein the source of vacuum ultraviolet radiation is a laser (page 1710, Fig. 1) ; wherein the device further comprising a mass spectrometer with a source of radiation and a component capable of forming the peptide or protein ion from a sample; wherein the mass spectrometer

includes a first mass analyzer and a second mass analyzer which are time of flight mass analyzers (quadrupole acceleration time of flight mass spectrometer, see title and also page 1710, Fig. 1); wherein the device further comprising an ion trap that is coupled to a mass analyzing component (page 1716, left column, line 12); wherein the mass/charge ratio is inherently measured by the mass spectrometer.

Therefore, the cited reference is deemed to anticipate the instant claims above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 21-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Baldwin, Muhlberger, and Butcher.

Baldwin teaches what is above.

Baldwin does not teach the component capable of forming the peptide or protein ion from a sample is an electrospray device; the vacuum ultraviolet radiation has a wavelength of about 157 nm. However, Baldwin teaches many different ionization methods such as electrospray (page 1708, left column, line 4) are the driving force behind the dramatic growth of biological mass spectrometry (page 1708, left column, lines 3-8).

Muhlberger teaches the vacuum ultraviolet radiation with a wavelength of about 157 nm (see above).

Butcher teaches analyze protein/peptide with a laser source with a wavelength (118 nm, see above) close to 157 nm .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Baldwin by using a electrospray as an ionization methods and setting the wavelength of the vacuum ultraviolet radiation to about 157 nm because Baldwin

teaches electrospray is one the primary method for mass spectrometry and Muhlberger teaches a vacuum ultraviolet radiation with a center wavelength of about 157 nm and Butcher teach analyze protein/peptide with a laser source with a wavelength (118 nm, see above) close to 157 nm. One would have been motivated to make the modification because Butcher et al. specifically discussed the use of the laser source with peptide analysis (page 360, under Applications of SPI-MS), and would reasonably have expected success in view of Baldwin's teaching of matrix-assisted laser desorption/ionization coupled with quadrupole time of flight mass spectrometry for protein analysis (title) and Muhlberger's teaching of laser with a wavelength of 157 nm which is the range (118 nm) that Butcher used for peptide analysis.

It would have been obvious to one skilled in the art to substitute one known, equivalent element for another to obtain predictable results because Baldwin teaches that electrospray is one of the ionization methods that serve as the primary driving force behind the dramatic growth of biological mass spectrometry (page 1708, left column, lines 3-8).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

No claim is allowed.

Certain papers related to this application may be submitted to Art Unit 1657 by facsimile transmission. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 C.F.R. § 1.6(d)). The official fax telephone number for the Group is 571-273-8300. NOTE: If Applicant *does* submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Any inquiry concerning rejections or objections in this communication or earlier communications from the examiner should be directed to Bin Shen, Ph.D., whose telephone number is (571) 272-9040. The examiner can normally be reached on Monday through Friday, from about 9:00 AM to about 5:30 PM. A phone message left at this number will be responded to as soon as possible (i.e., shortly after the examiner returns to her office).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Jon Weber can be reached at (571) 272-0925.

B Shen

Art Unit 1657

/JON P WEBER/

Supervisory Patent Examiner, Art Unit 1657